

**REMARKS**

Claims 1-3 are all the claims pending in the application.

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Claim 3 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 1 and 2 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown (U.S. Patent No. 4,721,647) taken with Lantieri et al. (U.S. Patent No. 5,571,431).

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown '647 taken with Lantieri et al. (U.S. Patent No. 5,571,431).

The Applicants traverse the rejections and request reconsideration.

***Claim rejection under 35 U.S.C. § 112, second paragraph***

The Applicants respectfully amend the claims to overcome their rejections based on section 112, second paragraph.

***Claim rejections under 35 U.S.C. § 103(a)***

**Rejection of claims 1 and 2 under 35 U.S.C. § 103(a) based on Brown.**

The present invention as recited in claim 1 requires the simultaneous display of the welding current value and the welding voltage value.

The Examiner, referring to Figures 9 and 10 and the description at columns 2-3 and 9 of Brown, contends that Brown suggests a welding apparatus wherein commanded and actual values of wire-feed speed etc. are monitored and displayed. However, Brown only discloses that upper limit values, lower limit values, preferred values, tolerance values or an actual value of the

parameters such as wire-feed speed etc. may be monitored, and nowhere in Brown teaches or suggests that a wire feeding speed command value is displayed.

On the other hand, Lantieri teaches that demand values and actual values of a motor speed, etc. are simultaneously displayed wherein the demand motor speed is supplied to the motor for controlling the travel speed of the torch electronic relative to a workpiece or the fed rate of a filler wire (Abstract and claim 1). However, Lantieri also fails to teach or suggest that a wire feeding speed command value is displayed.

The speed of the motor and the feed rate of a filler wire have a proportional relationship with the wire feeding speed and, therefore, it indirectly indicates the wire feeding speed. However, since such motor speed is displayed in units of rpm or rad/s, the user cannot recognize the value of the wire feeding speed intuitively. On the contrary, the wire feeding speed command value is a specific parameter that intuitively indicates the welding conditions.

Therefore, the display of the wire speeding feed is significantly advantageous to the user.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants' disclosure. MPEP 2143 citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The patent office has not satisfied the burden of establishing *prima facie* obviousness at least because it has not satisfied the “all limitations” prong of the three prong test for obviousness. Specifically, the patent office has not shown that the combined teachings of Brown and Lantieri suggest the invention as a whole including at least the above discussed limitations.

At least for the reason that the “all limitations” prong of the test for establishing *prima facie* obviousness fails, the “motivation to modify/combine” prong also must fail. In other words, a skilled artisan would not have been motivated to combine the teachings of Brown and Lantieri with reasonable expectation of success.

The present invention as recited in claim 2 requires a current display selecting means for selecting a display of either the detected welding current or the current command value. Likewise, a voltage display selecting means for selecting a display of either the detected welding voltage or the voltage command value is required. Further, a feeding speed display selecting means for selecting a display of either the detected feeding speed or the feeding speed command value is required. The patent office appears to ignore these limitations of claim 2. The combined teachings of Brown and Lantieri do not suggest these features.

Rejection of claim 3 under section 103 based on the combined teachings of Brown, Lantieri and Shimogama

In rejecting claim 3, the patent office contends that the only difference between claim 3 and claims 1 and 2 is that claim 3 includes the additional limitations related to the robotic elements. However, we believe there are significant other differences that the patent office appears to ignore. For example, the present invention requires that the apparatus be operable to select one of a welding current command value and an actual welding current value as a welding

current value data. Likewise, the apparatus is required to be operable to select one of a welding voltage command value and an actual welding voltage value as welding voltage value data. Still further, the apparatus is required to be operable to select one of a wire feeding speed command value, an actual wire feeding speed and a torque value of the motor as wire feeding speed data.

The combined teachings of Brown and Lantieri do not suggest the above features. Further, Shimogama does not overcome these deficiencies. We propose arguing that the patent office has not satisfied the burden of establishing *prima facie* obviousness at least because it has not satisfied the “all limitations” prong of the three prong test for obviousness. Specifically, the patent office has not shown that the combined teachings of Brown, Lantieri and Shimogama suggest the invention as a whole including at least the above discussed limitations.

At least for the reason that the “all limitations” prong of the test for establishing *prima facie* obviousness fails, the “motivation to modify/combine” prong also must fail. In other words, a skilled artisan would not have been motivated to combine the teachings of Brown, Lantieri and Shimogama with reasonable expectation of success.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent Application No.: 10/509,492

Attorney Docket No.: Q83618

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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